

Hazard Control Plan Cover Sheet

Work/Activity: Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Identification Number: LANL-RRES-ECO-SF-HCP/OP-006, R4

Author:

Phil Fresquez
Name

Signature

Date

Initial Risk Level: Low

Consultation

☐ Not Required ☐ Required

Concurrence

☐ Not Required ☐ Required

Name (ECO Subject-Matter Expert)

Signature (as required)

Date

Name (Independent Peer)

Signature (as required)

Date

Safety Officer

Signature

Date

Team Leader

Signature

Date

Residual Risk Level: Minimal

Authorization of Work:

Group or Deputy Group Leader

Signature

Date

Next Review Date:

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Los Alamos National Laboratory

LANL-RRES-ECO-SF-HCP/OP-006, R4

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1.0 INTRODUCTION

1.1 Background A description of the Egg Monitoring Program is provided in the Foodstuffs Monitoring portion of the Environmental Monitoring Plan for 1999–2001 (LA-UR-99-1117).

1.2 In this Document This procedure addresses the following major topics:

Section	Topic	Page
1.0	Introduction	1
1.1	Background	1
1.2	In this Document	1
1.3	History of Revision	1
2.0	Purpose	1
3.0	Scope	2
4.0	Definitions	2
4.1	Terms	2
5.0	Responsibilities	2
5.1	Principle Investigator	2
5.2	Workers	2
5.3	Line Managers/Supervisors	3
5.4	Subject-Matter Experts	3
6.0	Precautions and Limitations	3
7.0	Safe Work Practice Requirements	3
7.1	Define the Work	3
7.2	Identify and Evaluate Hazards	4
7.3	Develop and Implement Controls	5
7.4	Perform Work Safely	6
7.5	Provide Feedback and Continuous Improvement	6
8.0	Risk Determination	6
9.0	Training	6
10.0	References	7
10.1	Source Documents	7
10.2	Document Coordination	7

1.3 History of Revision This table lists the revision history and effective dates of this procedure.

Revision	Date	Description Of Changes
0	10/4/96	New document
1	4/99	Reformatted in accordance with LIR300-00-01, Safe Work Practices
2	4/01	Added new Section 9.0, Training
3	4/02	Change in directorate.
4	4/03	Team name change to Environmental Surveillance.

2.0 PURPOSE

This Environmental Surveillance Team procedure describes the process for collecting and preparing egg samples as part of the Foodstuffs Monitoring Program, as mandated by DOE Order 5400.1, 5400.5.

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Los Alamos National Laboratory

LANL-RRES-ECO-SF-HCP/OP-006, R4

Approval Date: 04/03

3.0 SCOPE

This procedure applies to the individual assigned to process egg samples as part of the Foodstuffs Monitoring Program. The principle investigator (PI) is Phil Fresquez, the lead technician is Louis Naranjo, Jr., and the assistant is Rick Velasquez.

4.0 DEFINITIONS

4.1 Terms Foodstuffs: produce (fruits, vegetables, and grains), fish (surface feeders and bottom feeders), eggs, milk, brewed tea, honey, and game animals.

5.0 RESPONSIBILITIES

5.1 Principle Investigator PIs are responsible for

- Defining the components of and the processes associated with the work in sufficient detail to enable hazards to be identified and adequately controlled;
- Determining required training for workers;
- Ensuring that assigned workers are trained and meet authorization to work standards; and
- Ensuring that workers have the knowledge, skills, and abilities needed to perform the work safely.

5.2 Workers Workers, with assistance as needed, are responsible for

- Identifying and evaluating the hazards associated with the work, as necessary, to ensure that the controls are adequate to perform the work safely;
- Defining, establishing, and maintaining, as assigned, a hazard-control system that effectively mitigates the hazards associated with the work and meets institutional and facility requirements;
- Determining that the work has been authorized before proceeding with it;
- Acquiring the knowledge and skills needed to perform the work;
- Obtaining and maintaining authorization to perform the work;
- Understanding and following all operational requirements and restrictions related to the work;
- Performing the work safely;
- Improving the safety of the work by reviewing the work, commensurate with the level of risk, and incorporating lessons learned;
- Using an appropriate change-control process to document and communicate changes made in the hazard control system; and
- Stopping the work if it seems to be unsafe.

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Los Alamos National Laboratory

LANL-RRES-ECO-SF-HCP/OP-006, R4

Approval Date: 04/03

5.0 RESPONSIBILITIES (cont.)

5.3 Line Managers/ Supervisors

Line managers/supervisors are responsible for

- Defining the scope of work;
- Ensuring that an effective hazard-control system is established to reduce the risk posed by the work to an acceptable level;
- A periodic review of the process used to assign and mitigate initial risk;
- Ensuring that institutional and facility requirements and restrictions on the work are followed;
- Authorizing the defined work, when the risk has been controlled to an acceptable level;
- Authorizing workers to perform the work, after they have documented adequate knowledge, skills, and abilities;
- Ensuring that workers perform the work safely;
- Improving the safety of the work by reviewing the work, commensurate with the level of risk, and ensuring the incorporation of lessons learned; and
- Ensuring that an appropriate change-control process is used to document and communicate changes made in the hazard-control system.

5.4 Subject Matter Experts

Not applicable to the procedures described in this document.

6.0 PRECAUTIONS AND LIMITATIONS

This document establishes the basic requirements for collecting egg samples for the Environmental Monitoring Program. This procedure applies to all personnel performing field procedures described in this document. Work performed under this procedure by LANL personnel will occur only after all other applicable procedures have been reviewed and signed as listed under Section 7.0 of this document.

7.0 SAFE WORK PRACTICE REQUIREMENTS

7.1 Define the Work: Collection of Egg Samples

Project Personnel - In accordance with the procedure for field work, a minimum of two people is required to go out in the field.

Sample Locations - Eggs shall be collected in the summer of each year from the closest free-ranging chicken facility in perimeter areas (e.g., Los Alamos, White Rock/Pajarito Acres, and/or San Ildefonso). Eggs will be analyzed for various radionuclides and compared to eggs collected from regional background areas (Española, Santa Fe, or Jemez).

Number of Samples - The following table lists the approximate number of samples to be collected at perimeter and regional locations:

	Eggs
Perimeter	2 dozen
Regional	2 dozen

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Los Alamos National Laboratory

LANL-RRES-ECO-SF-HCP/OP-006, R4

Approval Date: 04/03

7.0 SAFE WORK PRACTICE REQUIREMENTS (cont.)

Equipment Needed - The following equipment is required for sampling eggs:

- ice chest with ice
- marker for labeling bags
- chain-of-custody forms (see procedure LANL-RRES-ECO-HCP/OP-SF-008, R3, and Attachment 1)

Sampling Eggs - In late summer, travel to the sampling locations to collect eggs for analysis. For each sampling trip, perform the following steps:

Step	Action
1	Follow the procedure governing general field work (LANL-RRES-ECO-HCP/OP-001, R2). Check the condition of the vehicle and the fuel level before leaving for the field.
2	Travel to the sampling location and collect two dozen eggs directly from the producer (farmer); eggs are usually placed in egg cartons.
3	Place cartons in labeled plastic bags (date, location, and sample number), and pack on ice for transport back to the Laboratory. Complete a chain-of-custody form (Attachment 1) with the appropriate sampling information, and follow applicable chain-of-custody procedures for samples (refer to LANL-RRES-ECO-HCP/OP-SF-008) until submitted to an analytical laboratory for analysis. We currently employ Paragon Analytics, Inc., Fort Collins, CO.
4	Once at the Lab, seal the cartons with chain-of-custody tape, and store the eggs on ice or in a refrigerator until they are submitted to an analytical laboratory (normally within two working days).

Processing of Egg Samples

No processing of egg samples is necessary before submitting samples to Paragon Analytics, Inc.

Submittal of Samples

Submitting the Samples - Submit all samples to Paragon Analytics, Inc., for tritium, heavy metal, and radiochemical analyses.

Request the following analyses on the appropriate chain-of-custody forms:

- analysis of tritium content; reported in pCi/L of tissue moisture
- analysis of strontium-90, cesium-137, plutonium-238, plutonium-239/240, and americium-241; reported in pCi/L
- analysis of uranium; reported in µg/L

Note: Two dozen eggs equals approximately one liter.

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Los Alamos National Laboratory

LANL-RRES-ECO-SF-HCP/OP-006, R4

Approval Date: 04/03

7.2 Identify and Evaluate Hazards

Hazard

Initial Risk Level based on Severity and Likelihood

A) Off-road automobile accidents and tripping or falling hazards	LOW
B) Wildlife encounters (plague, hantavirus, ticks, etc.)	LOW
C) Environmental hazards (weather)	LOW
D) Lifting and moving heavy items	LOW
E) Repetitive motion and other ergonomic hazards	LOW

7.0 SAFE WORK PRACTICE REQUIREMENTS (cont.)

7.3 Develop and Implement Controls

7.3.1 Development

Hazard

Hazard Control

Residual Risk Level

A Off-road automobile accidents and tripping or falling hazards	LANL personnel will follow operating procedures discussing off-road vehicle use and tripping or falling hazards. Appropriate footgear and clothing will be worn by all LANL personnel. Personnel will have first aid/CPR training.	MINIMAL
B Wildlife encounters (plague, hantavirus, ticks, etc.)	In accordance with recommendations set by the State of New Mexico Environmental Department, all personnel should wear long pants, long-sleeved shirts, and insect repellent. Do not handle dead or sick rodents. When you have returned from the field, perform a self-check for the presence of ticks.	MINIMAL
C Environmental hazards (weather)	LANL personnel will cease operations during inclement weather as described in RRES-ECO operating procedures for conducting general fieldwork. All work will be performed within a safe distance to vehicles. The distance will be based on current field conditions and terrain with respect to current and expected weather conditions.	MINIMAL
D Lifting and moving heavy items	Use carts and dollies. Use a helper.	MINIMAL
E Repetitive motion and other ergonomic hazards	Take a short break every hour.	MINIMAL

7.3.2 Documentation

All personnel assigned to participate in egg sampling will have read this hazard control plan/operating procedure and will have signed an acknowledgment (Attachment 2).

Any future changes to this operating procedure will be properly documented and will be reflected by the revision number that is included with the document identification number.

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Los Alamos National Laboratory

LANL-RRES-ECO-SF-HCP/OP-006, R4

Approval Date: 04/03

7.0 SAFE WORK PRACTICE REQUIREMENTS (cont.)

7.3.3 Authorization of Work All LANL workers involved with this activity will obtain authorization from their direct supervisor, group leader, or deputy group leader. No work will be performed until this authorization has been granted. The residual risk level for performing activities related to this activity have been determined based on consultation with subject matter experts including contractor personnel and LANL personnel experienced in this type of procedure.

All work related to this activity will be reviewed, at a minimum, on an annual basis, and this document updated to reflect changes as deemed necessary.

7.3.4 Authorization of Workers LANL workers will be granted authorization to perform this work only after they have reviewed all appropriate required documentation and training that applies to LANL personnel. All contractor personnel will perform this work only after they have provided proof of appropriate documentation that applies to contractor responsibilities.

7.4 Perform Work Safely All personnel involved with this activity will adhere to all safety guidelines and procedures as described in the appropriate documents, including this document. Contractor personnel will be responsible for ensuring self-readiness checks before performing the work. LANL personnel will perform self-readiness checks before performing fieldwork. Field conditions, including weather conditions, will be evaluated as to the effect they will have on performing field activities safely. If activities can not be performed safely, all activities will cease until such time the LANL project leader authorizes work to resume.

7.5 Provide Feedback and Continuous Improvement At a minimum, the activity described in this document will be evaluated annually. If any changes are made to the procedure, those changes will be evaluated as to whether or not they may introduce new hazards. Any new hazards will be evaluated and appropriate controls implemented to reduce their risk to an acceptable level. A periodic review with project personnel will be made to evaluate the accuracy of this document with respect to field operations.

8.0 RISK DETERMINATION

The determination of risk for each activity described in this document was based on the Risk Determination matrix given in LIR300-00-01, Safe Work Practices.

9.0 TRAINING

The following training must be completed and confirmed by the PI of the project before work can begin:

For each worker:

- General Field Work HCP/OP (LANL-RRES-ECO-HCP/OP-001) must be read and documented.
- Thermal Stress Awareness Training must be taken when it becomes available

For each field crew:

- At least two people must have current First Aid Training.
- At least two people must have current CPR Training.
- Members must have site-specific training as required by the location where work is occurring.

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Los Alamos National Laboratory

LANL-RRES-ECO-SF-HCP/OP-006, R4

Approval Date: 04/03

10.0 REFERENCES

10.1 Source Documents The following documents, which can be found in the Team Leaders (Phil Fresquez) Office located at TA-21, Building 210, Room 222, are referenced in this procedure:

(Due to current revisions, some document numbers may change)

- LA-UR-99-1117, "Environmental Monitoring Plan"
- LANL-RRES-ECO-HCP/OP-SF-008, "Chain-of-custody for Environmental Samples"
- LANL-RRES-ECO-HCP/OP-001, "General Field Work"

10.2 Document Coordination RRES-ECO (Ecology Group) of the Risk Reduction and Environmental Stewardship Division is the group of institutional coordination responsible for developing, revising, and maintaining the contents of this document.

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Los Alamos National Laboratory

LANL-RRES-ECO-SF-HCP/OP-006, R4

Approval Date: 04/03

EGG SAMPLING FOR THE FOODSTUFFS MONITORING PROGRAM

ATTACHMENT 1: CHAIN-OF-CUSTODY RECORD

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

Los Alamos National Laboratory
LANL-RRES-ECO-SF-HCP/OP-006, R4
Approval Date: 04/03

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Attachment 1

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Los Alamos National Laboratory

LANL-RRES-ECO-SF-HCP/OP-006, R4

Approval Date: 04/03

Attachment 2

Training Documentation Sheet

Hazard Control Plan/Operating Procedure for

Egg Sampling and Monitoring for the Foodstuffs Monitoring Program

I, the undersigned, have read and fully understand the Hazard Control Plan/Operating Procedure for egg sampling and monitoring for the foodstuffs monitoring program.

Signature _____ Date _____

Print Name _____

Self-Study Training _____ Date _____
(Supervisor's signature)

On-the-Job Training _____ Date _____
(as required) (Supervisor's signature)